

Date: Sun, 22 Aug 93 04:30:06 PDT  
From: Info-Hams Mailing List and Newsgroup <info-hams@ucsd.edu>  
Errors-To: Info-Hams-Errors@UCSD.Edu  
Reply-To: Info-Hams@UCSD.Edu  
Precedence: Bulk  
Subject: Info-Hams Digest V93 #1002  
To: Info-Hams

Info-Hams Digest                      Sun, 22 Aug 93                      Volume 93 : Issue 1002

Today's Topics:

Daily Solar Geophysical Data Broadcast for 21 August  
IsoLoop Users: Anyone using the IT-1?  
regarding DATA communications on the HF bands.

Send Replies or notes for publication to: <Info-Hams@UCSD.Edu>  
Send subscription requests to: <Info-Hams-REQUEST@UCSD.Edu>  
Problems you can't solve otherwise to brian@ucsd.edu.

Archives of past issues of the Info-Hams Digest are available  
(by FTP only) from UCSD.Edu in directory "mailarchives/info-hams".

We trust that readers are intelligent enough to realize that all text  
herein consists of personal comments and does not represent the official  
policies or positions of any party. Your mileage may vary. So there.  
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Date: 22 Aug 93 05:34:53 GMT  
From: news-mail-gateway@ucsd.edu  
Subject: Daily Solar Geophysical Data Broadcast for 21 August  
To: info-hams@ucsd.edu

!!BEGIN!! (1.0) S.T.D. Solar Geophysical Data Broadcast for DAY 233, 08/21/93  
10.7 FLUX=094.8 90-AVG=104 SSN=043 BKI=0232 2101 BAI=005  
BGND-XRAY=A7.9 FLU1=2.1E+06 FLU10=1.1E+04 PKI=2233 2221 PAI=007  
BOU-DEV=004,011,030,010,014,008,004,006 DEV-AVG=010 NT SWF=00:000  
XRAY-MAX= B8.9 @ 1544UT XRAY-MIN= A6.8 @ 1024UT XRAY-AVG= B1.3  
NEUTN-MAX= +003% @ 1810UT NEUTN-MIN= -002% @ 2210UT NEUTN-AVG= +0.3%  
PCA-MAX= +0.2DB @ 1615UT PCA-MIN= -0.1DB @ 2340UT PCA-AVG= +0.0DB  
BOUTF-MAX=55372NT @ 1349UT BOUTF-MIN=55331NT @ 1853UT BOUTF-AVG=55356NT  
GOES7-MAX=P:+000NT@ 0000UT GOES7-MIN=N:+000NT@ 0000UT G7-AVG=+080,+000,+000  
GOES6-MAX=P:+120NT@ 0521UT GOES6-MIN=N:-066NT@ 1640UT G6-AVG=+102,-006,-050  
FLUXFCST=STD:095,095,090;SESC:095,095,090 BAI/PAI-FCST=010,015,010/010,015,010  
KFCST=2233 4332 3334 4322 27DAY-AP=006,005 27DAY-KP=2221 1212 2211 1211  
WARNINGS=  
ALERTS=  
!!END-DATA!!

NOTE: The Effective Sunspot Number for 20 AUG 93 was 47.0.  
The Full Kp Indices for 20 AUG 93 are not available.

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Date: Sun, 22 Aug 1993 05:28:35 GMT  
From: dog.ee.lbl.gov!overload.lbl.gov!agate!usenet.ins.cwru.edu!nshore!seastar!  
vikki@network.ucsd.edu  
Subject: IsoLoop Users: Anyone using the IT-1?  
To: info-hams@ucsd.edu

As quoted from <253qta\$eh2@inxs.concert.net> by cole@concert.net (Derrick Cole):

> In article <CC0H79.A41@cup.hp.com> genem@cup.hp.com (Gene Marshall) writes:  
> >  
> >I just received a new AEA catalog in the mail and saw the new IT-1  
> >Automatic Tuner for the IsoLoop 10-30. Since AES has this in stock  
> >already (\$259.95), I guess it's probably not \*that\* new and I was asleep  
> >at the switch on this one.  
> >  
> >Anyway, for that price I figured I better check it out first. Anyone on  
> >the net use this thing and have any comments? I was wondering if it  
> >really tunes it right in for you, or whether it just lets you pre-set 8  
> >memories. Also, that large thumbwheel knob looks interesting, but does  
> >it account for the 'play' in the mechanics?  
>  
> I saw this too, and have been meaning to ask about it on the net.  
>  
> >I don't get any DX on this loop, so I think \$250's going to be hard to  
> >justify.  
>  
> I have yet to purchase the IsoLoop, but am SERIOUSLY considering getting it  
> due to antenna restrictions. Could you (or anyone on the net) elaborate as  
> to it's performance? I've heard good things and bad things. I guess I'll  
> have to get one and see for myself!

Save your money and get a roll of magnet wire and a tuner.

I just acquired one of these this afternoon. It came from a friend who was just sick and tired of it. He could have gotten us two, but the other guy who pitched the one he had had too many morals to do that to anyone he knew (unhappy was an understatement).

The fellow we got it from has had it in his apartment for less than an year - never been outside of his covered balcony. The guy is a retired engineer and the unit had not been abused.

His reasons for getting rid of it was that he made one contact with it in the almost year that he had it. He also mentioned that it was almost impossible to tune - he would get it as close as he could between fast and slow tuning and then use the antenna analyzer to find out where it was actually at and then move the transmitter to that frequency. He was having better luck with his home brew slinky antenna.

I graciously accepted the present (a FREE \$300 antenna - HOW VERY NICE!), well that was about 6 hours ago. Now I am not so sure he \*is\* my friend :-).

Since then three of us including our local antenna guru have been working with it. We discovered the MAIN reason that it was so hard to tune - massive backlash in the gears driving the tuning capacitor. We ended up disassembling the gear train and removing about 1/8" of the main gear hub so that it was reasonably centered over the worm gear. After that we raised the stepper motor in the antenna so the gears meshed properly and that took care of that problem. The pin that holds the gear to the capacitor shaft is a common nail, how very quaint.

After getting it all back together we tried to tune it up. No luck, it was still impossible to hit the brief (when I say sharp, I mean SHARP) peak in the noise. We hauled out the schematic and started looking for a way to slow down the tuning. We finally figured it out and got a reasonably slow speed, but still too fast. A bit more experimenting and we got it so we could single step the motor. This allowed us to be able to move thru the peak in maybe 10 steps. I suppose I should note that we tried several rigs and mostly 30 and 20 Meters (best we did here was 3:1 swr). The 747 wasn't real happy with that :-). I suppose that I should also note that the antenna was out on the balcony reasonably well in the clear, height about 25' AGL.

Paul is running through the bands again from 30 Meters thru 10 Meters while I wait. Commentary is that there is still noticeable backlash in the geartrain which is especially noticeable in the single step mode. Passing through the audio peak, depending on the band runs from 6 to 10 steps of the motor (backlash accounted for). How anyone could use this without the ability to move the stepper motor one step at a time is beyond me, the peak (dip to lowest swr) is VERY sharp.

Sat Aug 21 23:18:33 CDT 1993

We were not having any luck getting the swr down to something that wouldn't cook the 747, so we took a 3' 2x2 and bolted the isoloop to that with about an inch sticking out the top and 'C' clamped that to the mast that it was on. MUCH better results, as follows:

Band	SWR	Notes
30 Meters:	1.3:1	
20 Meters:	1:1	
17 Meters:	1.5:1	
15 Meters:	1.05:1	
12 Meters:	2.5:1	
10 Meters:	2.5:1	(28.395 Mhz)
10 Meters:	3:1	(28.06)
10 Meters:	4:1	(29.0) Looking for someplace usable...

Repeatability on these wasn't too tough once you get the hang of it.  
Still awfully time consuming.

Sun Aug 22 00:13:22 CDT 1993

Just for grins we tried 40 Meters - best we did there was infinity to one :-).

As a comparison we used a random length "dipole" strung around the apartment and using the mfj-949d tuner we were able to consistantly do 3db-10db better than the isoloop on receive and were able to tune it to 1:1 everywhere we tried (except 160 Meters) and it even tunes on 6 meters. Humm.

For \$300 "worth" of antenna, I would personally be a bit more than disappointed. The control box is crude and with the lack of indicators to make repeatability a bit easier and the worst part is that tuning it without being able to single step the motor is a nightmare. I see why Bob and his buddy got rid of the things. The idea of spending another \$259 for the "automatic antenna tuner for the isoloop" is folly, a \*\$600\* antenna ? On the last item, the documentation for the isoloop declares a tuner to be unnecessary, did I miss something here ?

Our antenna guru's comments on the matter are: The enclosure for the antenna itself was appropriately shaped. Add two more fins on the back and pack it with explosives and you could have a real \*useful\* bomb :-). He suggests, rather than spending \$600 for a lousy antenna, make an antenna and a matchbox and save the other \$580 <grin>.

John has no comments - about 2100 local time he decided we were nuts to keep wasting our time and went and found something fun to do.

By me this is rated: not impressed. The thing that surprised me most when Bob brought it in was that it is HUGE. From the pictures I expected something much smaller. It ain't light to lug either.

When we took the control box apart, we found a small stepper motor in the box, but with the wires disconnected (it ended in a keyed connector, that is 4 wire that plugs into another connector on the circuit board that is 5 pins, but they are marked with ABCD). We hooked it up just to see what it did and it dragged the power supply (wallwart) down to unusability (it worked OK as long as you didn't plug the antennas cable in). Anyone else have one of these in the box ? What is the "stepper motor option" supposed to be? Nothing was connected to this, is it supposed to just make noise to make you feel better since there is no feedback from the antenna itself ? I would suppose that if you bought that option it would probably come with a bigger wallwart ? The schematic only shows it as a square with 4 wires coming out of it marked ABCD. No, Bob never took the cover off the box.

Thanks for sharing our evening of fun evaluating "the bomb". As I said when I started this, go get a roll of magnet wire and a tuner and find something useful to do with the other \$200 (more or less :). I guess I am supposed to add here that your milage may vary :-)

Take care es 73, Vikki, Paul and John.

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Vikki Welch, SysAdmin Welch Research, WV9K, DoD#-13  
vikki@seastar.org, vikki@wv9k.atl.ga.us(weekly)

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Date: Sun, 22 Aug 93 08:23:18 GMT  
From: usc!howland.reston.ans.net!math.ohio-state.edu!magnus.acs.ohio-state.edu!  
cis.ohio-state.edu!mstar!n8emr!bulletin@network.ucsd.edu  
Subject: regarding DATA communications on the HF bands.  
To: info-hams@ucsd.edu

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| Automatic relayed from packet radio via |  
| N8EMR's Ham BBS, 614-895-2553 |  
=====

ZCZC AG29  
QST de W1AW  
ARRL Bulletin 87 ARLB087  
>From ARRL Headquarters  
Newington CT August 6, 1993  
To all radio amateurs

The ARRL has asked the FCC to expand on a proposed rules change regarding DATA communications on the HF bands.

In comments to the FCC filed July 30 responding to a petition filed by the American Digital Radio Society (RM-8280), the ARRL asked that amateur stations under automatic control be allowed to operate outside the specific subbands proposed in an earlier ARRL proposal, RM-8218.

Under the new proposal, stations operating outside the subbands would be subject to three limitations: they must not be able to initiate transmissions, they must be able to respond only to interrogation by stations operated under local or remote control, and they must be limited to a bandwidth of 500 hz.

In RM-8218 the League had opposed automatic control on HF bands except in specific subbands until a plan could be developed to minimize interference to users of other modes.

But the ARRL Board of Directors, at its July, 1993 meeting, considered a report by its committee on amateur radio digital communications, which suggested a way that semi-automatically controlled data communications could be accommodated outside of the restricted subbands. The Board agreed with the committee's recommendation.

All interested parties will have an opportunity to comment if or when the FCC issues a Notice of Proposed Rule Making.

More information on RM-8218 is in August QST, page 73. More information on the Board's deliberations will appear in September QST.

[Via HF Clover]

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End of Info-Hams Digest V93 #1002

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